

# Sandians Help Define New Defense Initiative

On March 23 President Reagan called for an initiative that could, in time, radically shift our national defense policy — from deterrence through mutually assured destruction (MAD), in which each country holds the civilian population of the other country hostage, to deterrence through a capability to destroy attacking weapons.

Three Sandians took part in an intense follow-on study aimed at beginning to explore the technical feasibility of various approaches to the new defense initiative. The three: Gerry Yonas, director of Pulsed Power Sciences 1200, who headed a panel on directed energy weapons; Bob Clem, director of Systems Studies 300, who became, in effect, head of the panel on countermeasures and tactics; and Glen Brandvold (301), a member of Bob's panel.

These panels — plus ones on conventional weapons; systems concepts; surveillance, acquisition, and tracking; battle management and data processing; and systems integration and plans — made up the 60-member Defensive Technologies Study Team (DTST). Chairman of the DTST was Jim Fletcher, former head of NASA; vice-chairman was Harold Agnew, former director of the Los Alamos National Lab.

Working in two hastily renovated — and secured — floors of an office building across the street from Defense Advanced Research Projects Agency in Rosslyn, Va., the study team began the summer with a meeting at which Fletcher presented the assignment: "Figure out what has been done [in anti-ballistic missile defense systems], what remains to be done, and what a realistic plan — with priorities, with budgets — would look like," recalls Gerry.

The DTST spent its first five days in listening to each other's views and those of other experts on what direction the new technologies should take. Most of the panel members represented DOE laboratories or DoD contractors so study team member interests and preconceptions were as divergent as the many energy and defense programs currently underway. "Each one tried to put the work of his institution in the best light," notes Bob. "That was natural — billions of dollars in government funding could be involved."

"I, like the other panel leaders, took a good deal of heat from all sides during these discussions," says Gerry, who recalls how much he appreciated an evening phone call from George Keyworth, Reagan's science advisor, telling him to "Hang in there, Gerry."

Some raw nerves, to use Bob's phrase, were to be expected — these were intelligent, strong-willed people with passionate beliefs.

Phase two of the summer's work involved information-gathering — a strenuous series of briefings by members of outside agencies for the next six weeks, with meetings running (as they did throughout the summer) from 9 a.m. to 6 p.m. and with homework to be done nights and weekends.

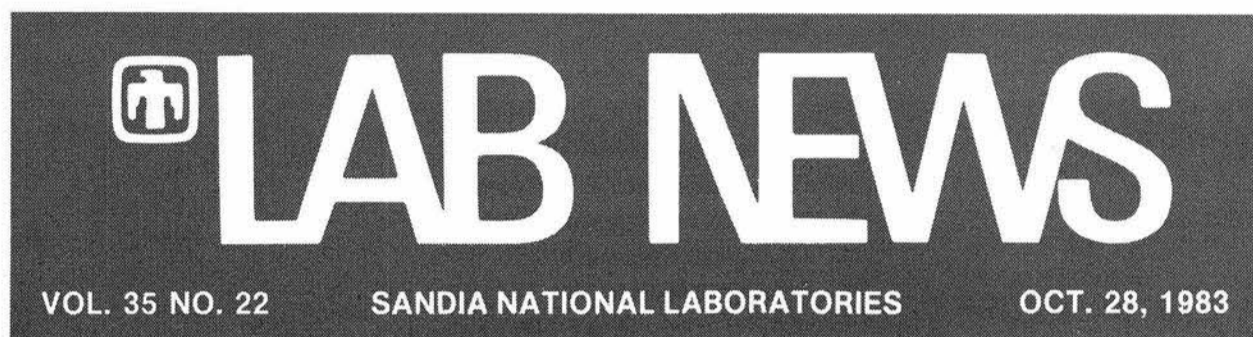
"What we did first was to look for areas of common ground," says Gerry, "ideas voiced by a variety of participants. But there was no easy consensus. It was clear that the new defense direction came direct-



Bob Clem (300)



Gerry Yonas (1200)



WE TAKE IT for granted, but it's a significant event for all Sandians — the contract under which Western Electric operates Sandia for the DOE has been renewed for another five years. Signatories are Ray Romatowski, AL manager, for DOE, and George Dacey, Sandia president and member of Sandia's board of directors, for Western Electric. (DOE photo)

ly from the President, not from any one agency or branch of the armed services. So there was no apparent organizational structure to fall back on." It was up to the DTST itself to accomplish the big task of the summer — to sort out a broad range of views and come up with a coherent plan for the nation's future defense.

And the views, those held by the panel members, those of the 60 or so people who briefed Gerry's panel, and the 100 or so who spoke to Bob's, were certainly broad. Some favored laser weapons in general, some nuclear-driven lasers in particular, some advocated chemical lasers, some pushed homing vehicles, some recommended neutral

particle beams, and so on. Each advocate's proposal had to be dissected and analyzed.

Underlying many of these arguments was the difficulty of forsaking the thus-far-successful, quarter-century-old offensive deterrence policy — MAD — for an untried defensive-dominant policy. As Gerry puts it, "it's not easy to make the philosophical shift away from a robust doctrine like MAD — it's probably impossible in three short months."

So there were many heated discussions as the participants tried — or were forced — to move away from the only doctrine many

(Continued on Page Four)

# Antojitos

Real Progress on the Reactor Front--Forty years ago (Nov. 4, 1943) at Clinton Labs (now Oak Ridge), the world's first nuclear reactor became operational. Just 11 months earlier (Dec. 2, 1942) under the University of Chicago athletic stands, Enrico Fermi had demonstrated that a nuclear chain reaction could be self-sustaining. It took nine months to assemble the 1-MW, air-cooled reactor, which was expected to begin producing usable heat during the daylight hours of Nov. 4. But, during the night of Nov. 3, the two teams of scientists loading the last of the uranium slugs into the central portion of the core became so bored at the monotonous task that they began competing with each other to see which team could load the slugs faster. And by 5 a.m., the lead scientists had to be called out of bed--the X-10 Pile began producing heat.

Then, it was nine months to build a reactor. Today, nine years--with luck. And we talk about progress.

\* \* \*

Well, They Hold Rodeos in Madison Square Garden--It's bad enough that the Conference of the Great Cities of America was held in San Juan, Puerto Rico. But holding the Invest in America's Cities exhibition in Europe--Zurich, to be precise--would be unbelievable if it weren't so believable.

\* \* \*

Trick or Treat?--Remember those clever Halloween tricks you used to play on your neighbors as a kid--soaping windows, tipping over an outhouse or two, moving an ugly old lumber wagon onto your neighbor's property? Wouldn't it have been great to have been able, somehow, to make your neighbor have to reset every one of his/her clocks and watches on Halloween?

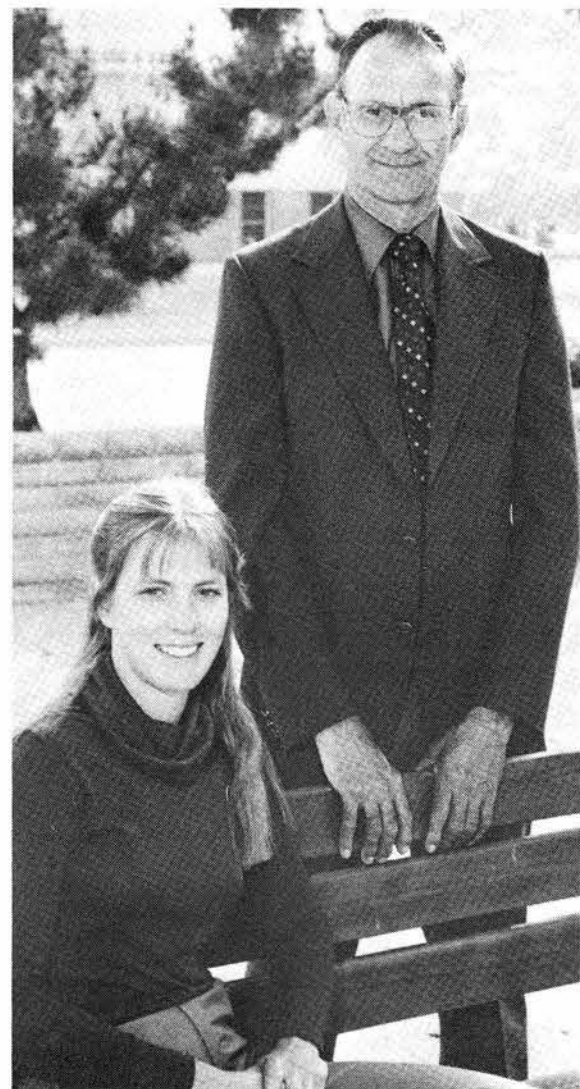
Well, I've succeeded. Enjoy Monday morning, everyone! •BH

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Law of Selective Gravity--An object will fall so as to do the most damage.

Corollary 1--The chance of the bread's falling buttered side down is directly proportional to the cost of the carpet.

Corollary 2--If the bread falls buttered side up, you buttered the wrong side.



MARY PHILLIPS (3435) and TOBY TOBYAS (3715)

## Supervisory Appointments

TOBY TOBYAS to supervisor of Purchasing Division D 3715, effective Oct. 7.

Toby joined the Labs as a machinist in June 1967. He had been a machinist at ACF Industries in Albuquerque before coming to Sandia. He completed his education under the Labs' educational aids program and in 1970 received his BS in business administration from the U of A. Later that year, he joined his current organization where he has had various purchasing assignments. In 1981 he was promoted to section supervisor of the group -- Fabrication and Liaison Section 3715-1 -- and with his current promotion becomes the division supervisor.

Toby enjoys scuba diving and spear fishing. He built a summer home at Elephant Butte, but he also enjoys diving at Conchas and Navajo Lake. He and his wife Ruth have three children and live in the SW Valley.

\* \* \*

MARY PHILLIPS to section supervisor (Lieutenant) in Security Operations Division II 3435, effective Oct. 21.

Mary joined the Labs' guard force in a part-time capacity in April 1981, and went full-time in April 1982. She is approaching completion of studies for a BS degree in biology from UNM. Her leisure time is mostly concerned with school, but she enjoys playing the piano, running, camping, and sewing. Mary lives in NE Albuquerque.

## Sympathy

To Bill Pregent (7521) on the death of his father in Eau Claire, Wis., Oct. 17.

To Jim McCreight (2154) on the death of his wife in Albuquerque, Sept. 7.

### EXPERTISE REVISITED

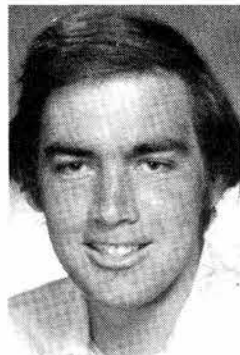


"Railroad carriages are pulled at the enormous speed of 15 mph by engines which, in addition to endangering life and limb of passengers, roar and snort their way through the countryside, setting fire to the crops, scaring the livestock, and frightening women and children. The Almighty certainly never intended that people should travel at such breakneck speed." (Martin Van Buren, 1782-1862)

## Sandia Organizing WE/CQ Contest Team

Ed Graham (2101), coordinator of the Sandia team of radio amateurs that consistently wins the WE/CQ contest (Sandia has possession of the traveling trophy), is organizing participation in the 1983 event to be held Nov. 12-14. The contest is among various WE and AT&T installations. All licensed radio operators, employees and retirees, are eligible to compete. For a copy of contest rules and instructions, call Ed on 4-6449.

## Death



James Ruppen of Physical Metallurgy Division 1832 died Oct. 17 after a long illness. He was 31.

He had worked at the Labs since January 1981.

He is survived by his wife.



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Editorial Offices in Albuquerque, 87185  
Phone 505/844-1053 FTS 844-1053  
In Livermore 415/422-2447 FTS 532-2447

BRUCE HAWKINSON, Editor  
DON GRAHAM, Assistant Editor  
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## Country Music Mecca Part of Sandian's Past

Minnie Pearl is like an aunt to her. She was raised backstage at the Grand Ole Opry in Nashville. She has sung professionally on stage with such well-known country western stars as Pee Wee King, Marty Robbins, Eddy Arnold, and Roy Acuff. She is Nancy Hunt of Publications Division 8265.

Even though Nancy ended her professional singing career while still a teenager back in Nashville in the 50s, she still returned to the Grand Old Opry for guest appearances many times while her mother was still alive.

Nancy's mother, Alcyone Bate Beasley, was the very first female performer on the Opry when it began in 1925. And she was the last of the original cast when she died a year ago. Mrs. Beasley began her musical career with her father, Dr. Humphrey Bate, a country physician whose "hillbilly" band, The Possum Hunters, was his weekend avocation. Nancy's mother got her start at age 13 with this band, playing ukelele and piano. The group became known as the best bluegrass band in Nashville and made many appearances on radio and the Opry.

For 53 years (until 1978), Mrs. Beasley played the piano and sang with the regulars on the Grand Ole Opry. This past summer, less than a year after her death, she was memorialized in the Country Music Hall of Fame's Walkway of Stars. Nancy went back to Nashville for the ceremony — dedicating a star in the lobby inscribed with her mother's name. "It was a proud moment," says Nancy, "one that I and my family will always cherish."

Nancy's career, even though limited to her teenage years, is also impressive. She sang in her mother's trio, known as the Beasley Sisters (with a sister Barbara), and also was one of the Checkerboard Checkeredettes. The second group got its name from the Ralston-Purina Company — the familiar checkerboard logo was its trademark. The company sponsored the Eddie Arnold Show on which Nancy and her group appeared regularly.

In time Nancy became a part of another of her mother's vocal groups known as Betty and the Dixie Dons. This quartet also did pop tunes, many of which were composed by Mrs. Beasley. Nancy recalls that her mother wrote arrangements for other groups, including the Jordanares (at one time the backup group for Elvis Presley).

In 1954 Nancy married and left Nashville for life on the army base at the Presidio while her first husband was in service. They did move back home for about four years, and Nancy performed some singing commercials for radio and television. She then returned to the Bay Area and didn't pursue her musical career professionally in California.

Over the years that Nancy has worked at Sandia, she has enjoyed participating in the Sweet Adelines as an amateur. But most of all she has savored the return visits to the Grand Ole Opry and the chance to once again be on stage, singing those old familiar "hillbilly" tunes.



THE BEASLEY SISTERS, back together again on stage in 1971 for a guest appearance on the Grand Ole Opry, included (from left) Nancy Hunt, her mother Alcyone Beasley, and sister Barbara Thompson. At left in back is Roy Acuff, a family friend and show headliner.

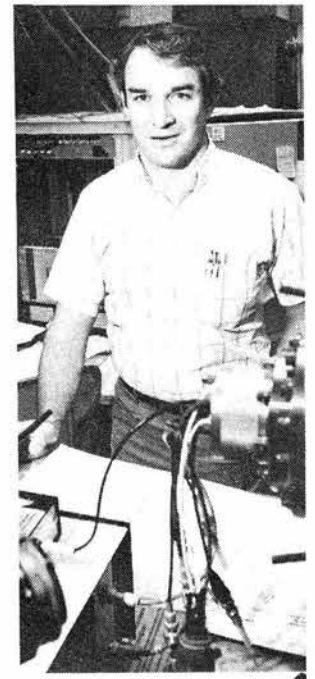


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THESE FOUR SANDIANS are among 24 winners of DOE's 1983 Material Sciences Research Competition. The purpose of the competition is "to identify individual laboratory scientists who have achieved outstanding research results and provide recognition of the accomplishment." The winners, all in the Sustained Outstanding Research category, are (left to right); George Thomas, Bill Wilson (both 8341), and Mike Baskes (8332) for "Gases in Metals," and Mike Knotek (1134) for "Electron and Photon-Stimulated Desorption of Atoms and Ions."

### Sympathy

To John Korellis (8123) on the death of his mother in Munster, Ind., Sept. 20.

To Jack Casey (8162) on the death of his mother in Tracy, Aug. 21.

### Congratulations

Lorenna Stiles (8453) and Dave Petersen, married in Livermore, Oct. 1.

### UPDATE ON SCIENCE FICTION



Today's readers of science fiction are indeed fortunate; this really is the genre's Golden Age. There are dozens of authors at work who can match all but the giants of the past. Yet I do not really envy the young men and women who first encounter science fiction as the days shorten toward 1984, for we old-timers were able to accomplish something unique. We were the last generation able to read *everything*. No one will ever do that again.

Arthur C. Clarke in *New York Times Book Review*

Continued from Page One

## New Defense Initiative

had ever dealt with. "Bob, Glen, and I tried to bring open minds to the meetings and to shed any cloak of self-interest," continues Gerry.

"I think we succeeded in being as objective as anyone on the team," adds Bob.

"I knew that I had succeeded," continues Gerry, "when I managed to make everybody angry at me. I started the summer with some of the military folks feeling I was biased against chemical lasers, but by the end of the summer the DOE people were calling me a 'chem-lase-symp.'"

Eventually the panels gained a clearer picture of which defensive technologies were already in progress and which ones were likely to prove themselves in the future.

But the tough part of the job was yet to be done. The third phase for each panel demanded choosing from the many options presented the ones to be proposed as the highest priority for the nation's future defense.

That's where Bob's panel on likely Soviet countermeasures, the Red Team, made itself very unpopular with some panels but, at the same time, valuable to the overall study.

As Gerry remembers it, "The turning point, the real watershed, of the summer came when the Red Team made it clear how difficult — and yet how important — it would be to defend our defensive systems, especially the space-based ones, against Soviet countermeasures. The members of the Red Team had the audacity to propose to simply shoot us out of the sky. That's when we all got very serious about the survival probabilities — not just for today but for the future — of the defensive technologies we were proposing."

At that point, Bob says, the internal discussions became "really spirited."

Tough questions had to be answered. How can space assets be hardened, protected? How do we overcome the temptation to advance an expensive, short-term defense that could be countered by inexpensive means in the long term? And what are the feasible time scales for getting a defensive system off the ground (as it were) — 10 years? 20 years? 30 years? In parallel with such thinking about defense system response times, the question of how long various enemy responses might take was addressed.

"Forcing the consideration of such problems didn't make the Red Team popular, it's true," recalls Bob. "But we felt that our analyses of the potential weaknesses in the Blue Team proposals were on firm technical grounds. Glen Brandvold did yeoman duty in this area."

"What Bob personally contributed to the work of all the panels was his intellectual skepticism, a vital attribute in any discussion of new technologies," says Gerry. "Bob has the unique ability to delineate weaknesses in reasoning but do it non-threateningly because his criticism was based on expertise and logic rather than on personal feelings."



SUMMER IN WASHINGTON was challenging, productive for Bob Clem (300) and Gerry Yonas (1200).

The panels finally succeeded in defining those defensive technologies that are expected to have the highest value in terms of both success and survival. The problem then became to rank them by priority and to calculate the funding implications of each one. "This third phase, setting priorities, turned out to be the most difficult task we faced," says Gerry. "Throughout the summer the people on my panel had proved themselves extremely knowledgeable — and highly opinionated. It took some real effort, and probably 30 percent of our time over the summer, to get them to arrive at a consensus."

"What I'm most proud of though — perhaps because Jim Fletcher said it couldn't be done — was writing a coherent statement that summarized the DTST conclusions — where we stood, what needs to be done — and get it signed off by the heads of the other panels."

The final DTST report from each panel was reviewed by the study team's overseers and last week reached the President. "Most of the report is classified," says Bob. "But we can say that it calls for a broad-based, in-depth, long-term, goal-oriented R&D program to investigate the feasibility of some exciting new defense programs."

"What we did should be a challenge that will stimulate real creativity — innovation, new approaches and ideas — on ways to counter a responsive threat," says Gerry. "That's what excites me most. In addition, I believe it could have the same catalytic effect on the US scientific and technical community that Sputnik did."

Bob agrees. "I can't think of any other challenge that we have faced as a nation, not even the space program, that's as technically formidable."

"Putting a man on the moon was simple, comparatively," adds Gerry. "At least, when the lunar module was landing, the moon didn't shoot back. And it didn't shift

position, or turn out to be green cheese — or quicksand."

What will this shift in strategy mean for Sandia? It's much too early to say, Bob and Gerry agree. But they point out that Sandia has expertise (and, in some cases, active programs) in several areas that might contribute to the new defense stance: assessing weapon effectiveness ("utility analysis"), lethality and weapon effects, technological risks, countermeasures, and threat definition; developing beam weapon technology and a variety of new sensors and radiation-hardened electronics; and system studies to determine how the new direction relates to current strategy and tactics, how it affects global stability.

"The new defense initiative could conceivably complicate current Soviet planning," says Bob. "And that could pay off in the long run."

"By introducing new uncertainties into the arms race, we hope that it will become possible to overcome the inertia that now seems to hinder meaningful arms reduction talks," says Gerry.

"It should also be remembered that the Soviets may go ahead with a major defensive program of their own," adds Bob. "For that reason, we need an R&D program whether we end up deploying a ballistic missile defense system or not. We need to know what is technically feasible."

How do Gerry and Bob view their summer's work? "It was a fascinating, exciting, intellectually stimulating experience that got better as the summer wore on," says Gerry. "I enjoyed working with the other people involved, especially Jim Fletcher and retired generals Ken Cooper and John Toomay."

"I felt it was an intense learning experience — one that more of us at Sandia should seek out," says Bob. "Gerry, Glen, and I certainly gained a better understanding of the problems that lie ahead."

# A Major Turning Point for Labs

New, and not necessarily nuclear, challenges lie ahead for the weapons labs.

That's the message delivered in a recent talk to Sandia's middle and upper management by George Keyworth, former division leader at Los Alamos National Lab and now President Reagan's science advisor and director of the Office of Science and Technology Policy.

Keyworth sees all the federal labs, including the three DOE weapons labs, at a major turning point, with substantial changes likely in the next few years. The President, said Keyworth, understands that the United States is distinguished from all other countries by the depth of its technical expertise, and "he realizes that our future lies in taking advantage of that expertise and making sure it's maintained."

Such expertise is found in our universities, industry, and the public sector institutions, like the federal labs. "I know that the kind of smarts found here at Sandia or in a few other labs is truly unsurpassed anywhere," Keyworth said. "So we have extraordinary human resources at hand. Our challenge is to use them, to assert our world leadership by capitalizing better on our unmatched expertise."

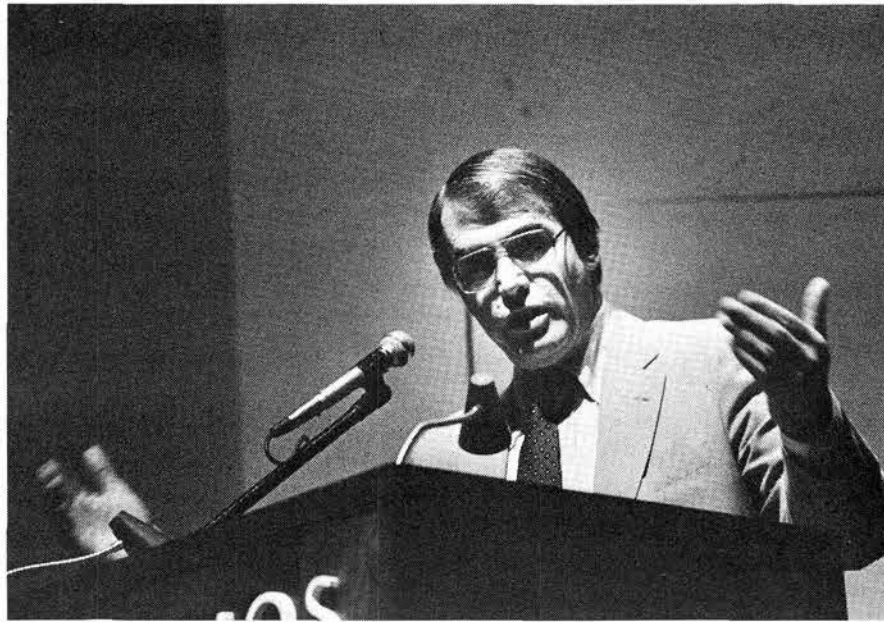
Keyworth noted that the administration is committed to making the changes recommended by the recent White House Science Council report (LAB NEWS, Aug. 19, 1983) and reiterated one conclusion from the report — those labs with the clearest sense of their mission are the labs that do the best work. "If I had to single out one action for a lab to concentrate on, it would be to deeply think through its mission, to simplify it, and to insist on pursuing it.

"I worry," he said later, "that the weapons labs may not be recognizing some fundamental changes now happening, changes that will intensify in the future." These changes involve a shift to a more balanced military deterrent, one with increased emphasis on conventional weapons. Such a shift reflects a change in basic strategy with far less reliance on nuclear retaliation than at present. "A place like Sandia must consider the role it might play as a *defense* lab, not only as a nuclear weapons lab.

"The time has come to broaden your bases, to begin to develop the kind of multidisciplinary research capability that will permit your participation in long-term defense R&D." This means understanding defense problems broadly and "comprehensive understanding of today's national security issues." (This process is already underway at Sandia.)

In response to the Soviet buildup in conventional weaponry, Keyworth said, "We have to go back to our strength — technology. We need non-nuclear weapons, smart ones, pinpoint ones, and advances in 'low-observable' aircraft that can cheat radar systems. Such a direction requires continued R&D to improve our capabilities and to explore countermeasures and counter-countermeasures.

"Sandia, especially with its outstanding capabilities in engineering and its close linkage with the paragon of industrial technical excellence [Bell Labs], should be able



GEORGE KEYWORTH, President Reagan's science advisor: "Sandia must consider the role it might play as a *defense* lab, not only as a nuclear weapons lab." (LANL photo)

to play an important, expanded role in national defense."

Sandia, in thinking of its mission, should remember that any R&D, including civilian, "that strengthens your technical base, that hones your tools, is going to make the Labs that much more competitive in a broader role."

Commenting on President Reagan's March 23 speech and its implications for Sandia, Keyworth said the President was proposing a concept, not a system, not a Star Wars fantasy. The concept is one that doesn't rely on retaliation for its effectiveness — not mutually assured destruction but a new stability based on rendering nuclear weapons obsolete.

"May I add, I don't know of a single one of us who has worked on nuclear weapons who hasn't wished for just such obsolescence," Keyworth said.

At the same time, the success of this new approach — and Keyworth pointed out the USSR must be assumed to have as good a chance to succeed at it as we do — would inevitably lead to increased emphasis on conventional weapons.

As far as the new defense initiative goes, the scientific community seems now to be cautiously optimistic, Keyworth said. The progress made in the last 10 years in high-speed information processing; in using satellites for navigation, communications, reconnaissance; in developing space lasers — all these and many other advances, traditional and non-traditional, "breathe vitality into the possibility of a workable defense system."

Keyworth said the Fletcher panel (see related story) has concluded that "we can now project the technology, even though it

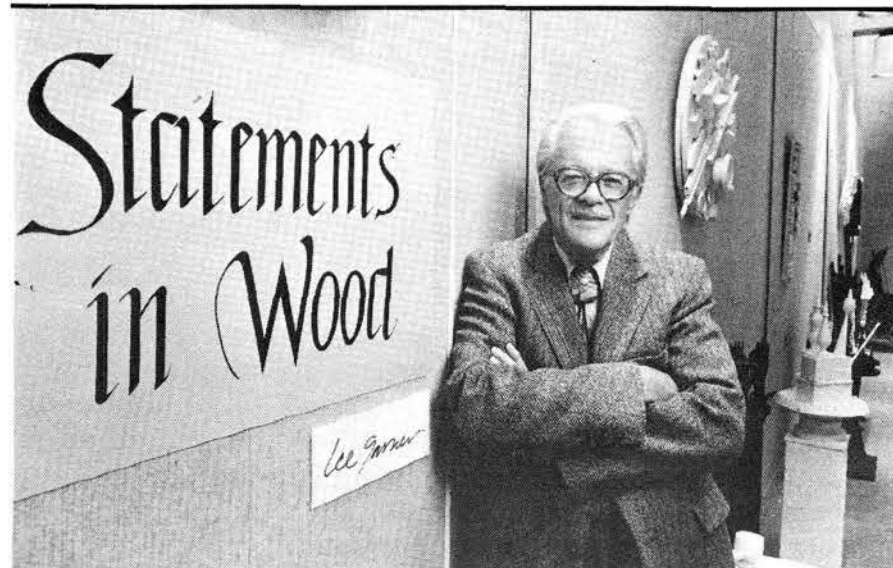
hasn't been demonstrated yet, to develop a defense system that could drastically reduce the threat of attack by nuclear weapons, not only today's but those that could reasonably be expected to developed to counter such a defense system."

Keyworth said the administration's current goal is to keep building momentum and national support for the program "in order to attract the very best talent to a formidable but worthy goal." It will take five or six years of R&D before the nation will be able to make the necessary critical decisions about developing, much less deploying, actual systems, he said. During this period those defense measures that are not yet as far along will be explored.

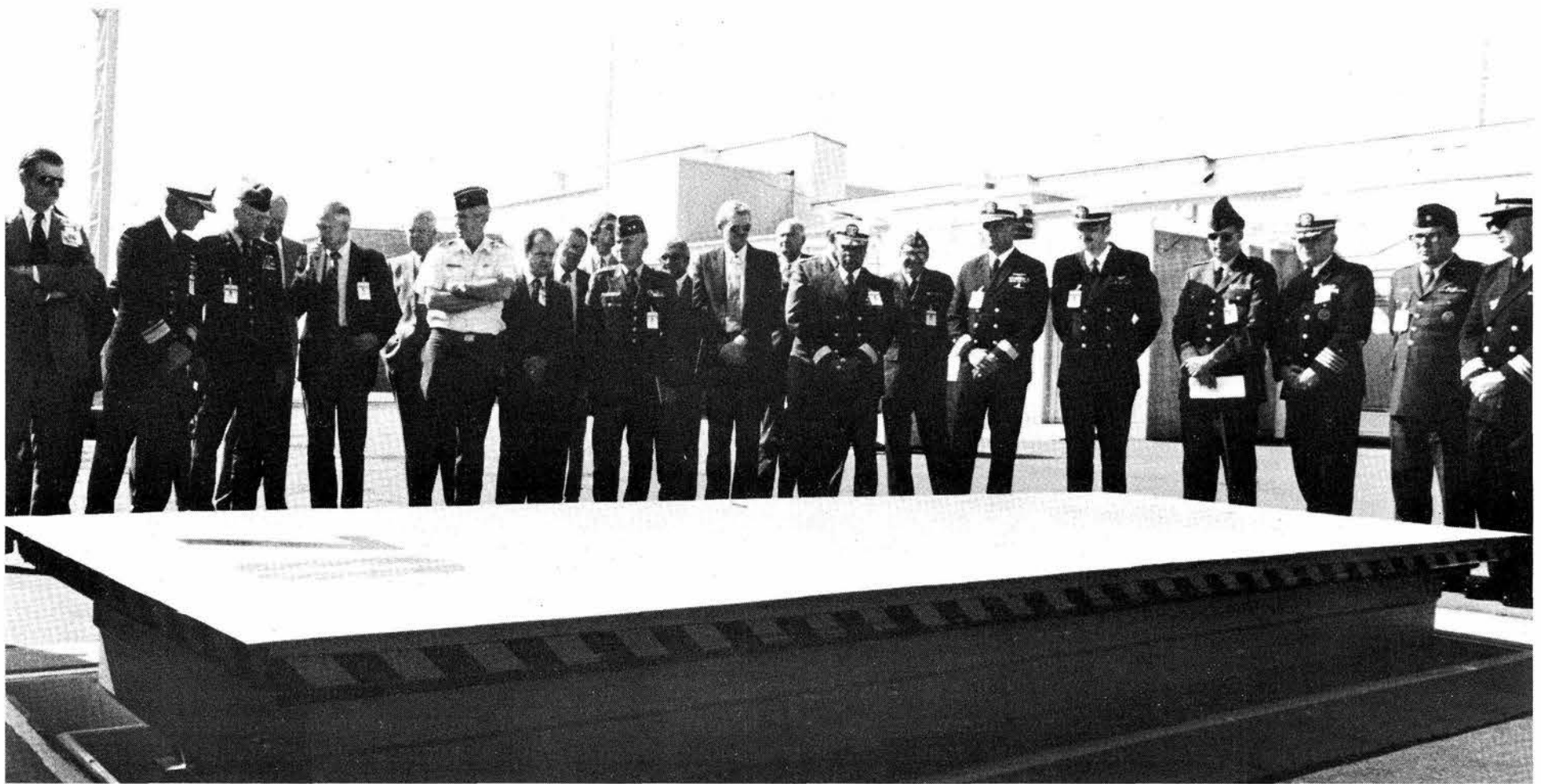
Where do the labs fit into this effort? Sandia, with its experience in particle beams and pulsed lasers, would seem to be a likely participant in an ABM program, Keyworth said. And, he noted parenthetically, one significant Sandia contribution has already been made — the service of Gerry Yonas on the Fletcher panel.

Keyworth doesn't see a critical role in the new defense initiative for nuclear weapons *per se*. The uses proposed for such weapons in space could just as well be performed with non-nuclear technologies. "But that reality shouldn't limit the ability of a place like Sandia to perform a real service to this program," he said. "The combination of talent, resources, and facilities here is rare among R&D institutions. So is your access to industry and universities.

"But still, the Labs is going to have to do some soul-searching and mount an aggressive effort if it expects to contribute to the initiative in a manner commensurate with its capabilities."



LEE GARNER (3151) saves the wood scraps the rest of us would throw away or use to heat the house, arranges them in whimsical patterns, then titles them to match. A collection of his work is on display in the new wing of the Tech Library — stop by and see this poplar exhibit.



MILITARY LIAISON COMMITTEE, the DoD group that places requirements on the DOE for design and production of specific weapon systems, visited Sandia recently. Here, the committee members and staff examine a weapon storage vault in Area II. Among those shown: Chuck Gilbert, DOE's Deputy Assistant Secretary for Nuclear Materials (left); Rear Admiral Warren Aut, the new director of Field Command, Defense Nuclear Agency (second from left); Major General Grayson Tate, Deputy Director, Defense Nuclear Agency (third from left); Rich Wagner, former deputy director of LLNL and now Chairman of the

MLC and Assistant to the DoD's Secretary of Defense for Atomic Energy (fifth from left); Major General Bill Hoover, DOE's Deputy Assistant Secretary for Military Applications (seventh from left); John Meinhardt, member of DMA (ninth from left); Major General David Einsel, Jr., executive secretary of the MLC (eleventh from left); Tom Cook (20; behind Einsel); Commodore Norm Johnson, MLC member (eighth from right); Commodore Roger Bacon, MLC member (sixth from right); Captain Donald Knepper, Joint Chiefs of Staff (third from right).

## Take Note

A two-hour cassette program, "Women and More — Winning Techniques for Goal Setting," is available for loan from Yolanda Padilla-Vigil (3511), Women's Program Coordinator. This program is designed to help women recognize some of the special psychological factors they may face in setting goals and achieving results. It also demonstrates how the goal-setting process can be used to open channels of communications with others. A workbook accompanies the audio cassette tapes and provides a step-by-step explanation of the goal setting process.

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Turn-of-the-century photographer Edward Curtis documented the lives of New Mexico Indians with his photographs. More than 100 of these prized original photogravures, silver prints, and orotones are now on exhibit in the west gallery of the Albuquerque Museum. The exhibit will close Feb. 19.

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Tomorrow morning at 8:30, a group will leave from the Indian Pueblo Cultural Center for a field trip to Abo pictograph sites and nearby petroglyph sites. Abo, located between Belen and Mountainair on Route 6, is an early 17th century mission church that served over 1500 members and became the center for the mission work among nearby pueblos.

The field trip is sponsored by the Friends of the Indian Pueblo Cultural Center and the center's Institute for Pueblo Indian Studies. Registration fee is \$5 for individuals and \$7.50 for families; participants should bring picnic lunches. For more information, con-

tact Ted Sturm on 821-7827.

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The Parent Center of APS is offering a free Mini-Conference for Parents on Nov. 12. Stop by the LAB NEWS office for registration form and workshop agenda.

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The recent Hispanic Leader's Day attracted Hispanics from around the state to learn about Sandia's employment opportunities and requirements. Activities focused on the conference theme, "Today's Leaders Hold the Key to Our Children's Future," and included presentations, lunch, and a tour of facilities. The conference was planned by Sandia's Hispanic Outreach Committee, headed by Al Villareal (3511).

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The aeronautical term "fly-by" takes on a new meaning at the American Institute of Aeronautics and Astronautics autumn dinner meeting as Don Emmick of Vought Corporation speaks on "The Common Housefly as a Powerplant for Ultra-small, Ultra-light Aircraft." The meeting is at the Bella Vista on Nov. 9 at 6 p.m. And it's \$5.50 (\$4 for students), including dinner. Make reservations with Terry Jordan (1635) on 4-4922 by Nov. 4.

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Retiring this month and not shown in LAB NEWS photos are Herman Marquez (3613), Harold Payne (7473), Emilio Torrez (3417), Cyrus Hall (5111), Ruperto Jaramillo (3426), Marie Luna (3141), Shirley Cleary (7252), Pete Rospopo (7485), and George Budrius (7233).

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Three members of Fire District 10 — the

volunteer fire and rescue service in the Tijeras area — recently received appreciation awards for community service from Governor Anaya. Recipients are: Mary Chambers, chief of the fire department and wife of Bill Chambers (1822); Harriet Mason (5238), primary dispatcher; and Tom Moody (Ret.), part-time dispatcher and charter member of the group. The Ideal Cement Co. also received a certificate; the plant provides water for the department and substantial financial assistance.

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The South 14 Bookstand — *A Brief History of New Mexico* by Jenkins & Schroeder is just that, telling its story in 90 pages. Nicely illustrated, it has many maps, including one of the main stagecoach routes. You went by stage from Santa Fe to Fort Wingate (near Gallup), for instance, by way of Peña Blanca, San Isidro, Cabezón Station, San Mateo (on the northern flank of Mt. Taylor), thence on to Wingate . . . not a journey for the faint of heart. This history is a good primer on our state, and it would be especially informative for the newcomer. It's published by the UNM Press and is \$4.95 at the LAB NEWS office in Bldg. 814.

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Nuclear physicists and other scientists and engineers are invited to a conference, "Nuclear Reactions: A Three-Day Dialogue between Physicists and Psychologists." Sponsored by a group called Image Seminars, it's to be held at UNM on Nov. 11-13. Cost is \$100 before Oct. 21, \$125 after, but check the flyer in the LAB NEWS office before you sign up. More info from Howard McConeghey at 277-5533.

## Fun & Games

**Triathlon of Albuquerque** — The seventh annual Triathlon (Jay Benson Memorial) is scheduled Sunday, Nov. 6, starting at 8 a.m. west of the KAFB's Olympic pool. The five-mile run, 10-mile biking, and quarter-mile swim will bring together men and women of all ages (from 9 to 70). Entry forms are available at the Coronado Club; fee is \$5. All participants receive a long-sleeved T-shirt and a biker's water bottle. Call Tom Lenz, recreation manager, on 4-8486 for signup.

\* \* \*

**Basketball** — Teams are organizing now for the start of SERP's winter basketball program. Team captains/managers should contact league president Luis Abeyta (7531), 4-8732, or Tom Lenz, 4-8486, for team roster forms. Deadline for registrations is Friday, Nov. 25. Play will be limited to the first 40 teams to register. Cost per player is \$6.50. DOE employees and their spouses as well as approved DOE and Sandia contractor people pay an additional \$9.80 recreation fee.

\* \* \*

**Softball** — The much-delayed Sandia Labs Softball Association end-of-season get-together is scheduled Thursday, Nov. 10, at the Coronado Club from 4:45 to 6 p.m. All participants are encouraged to attend. Beer, wine, soft drinks, and snacks will be in bountiful supply. A representative of the National Liar's Association will be on hand looking for entries for this year's national competition, so bring your stories.

\* \* \*

**Therapeutic Massage** — This popular class starts again Tuesday, Nov. 8, from 7 to 9 p.m. at the Coronado Club. The class will meet for three consecutive Tuesdays to explore the fundamentals of massage therapy. Registered massage therapist Bob Morgan will provide you and your partner information and techniques you can use at home to achieve relaxation. The class is not a solution or therapy for chronic back problems. Cost is \$13 per couple. Class is limited to 10 couples, so call Tom Lenz, 4-8486, right away.

\* \* \*

**Base Gym and Pool Closing** — Lap swimmers are aware of the close of the indoor Olympic Pool these past weeks. Estimate for a reopen date is Nov. 2. The KAFB East gym is also closed down while resurfacing work is underway. Again, Nov. 2 is the estimated reopen date. While the gym is closed, the weight room will remain open as will the men's locker room. Women may use the locker room in the swimming pool area.

\* \* \*

**Arts & Crafts** — There are many, many arts and crafts classes held at the Arts and Crafts Center on KAFB West. Did you know that Sandians, spouses, and children have access to that facility? In addition to the classes, you can be checked out by the staff on certain pieces of equipment and come in and work on your own film developing, printing, matting, framing, etc. SERP monies are used to offset the cost of the classes so it turns out to be an even better deal for you. Call Tom Lenz, 4-8486, to find out more about the Center's ongoing program.

\* \* \*

## Events Calendar

**Oct. 29** — Charity Bazaar: handcrafts and specialty items offered by some 50 non-profit groups of Albuquerque, Winrock Center Mall.

**Oct. 30** — NM Symphony Orchestra annual Halloween concert: Roger Melone conducting; featuring Michael Anthony, magician, and Lee the Mime, Bunraku Puppet Theatre, 1 and 2:30 p.m., KiMo.

**Oct. 30** — The Best of Broadway and International Theater: pre-Broadway Revival "Oliver," 8:15 p.m., Popejoy.

**Oct. 31** — Western Opera Theatre on tour from San Francisco Opera Center in "Madame Butterfly," 8 p.m., KiMo, 766-7404.

**Nov. 3** — The Best of Broadway and International Theater: "Amadeus" (did Mozart die a natural death or was he murdered?), 8:15 p.m., Popejoy.

**Nov. 3** — Hollyberry Fair, a Christmas Bazaar: baked goods, gift items, toys, Christmas decorations; lunch from 11:30-1:30 w/an express line; free nursery, St. Mark's on the Mesa, 431 Richmond Place NE.

**Nov. 4** — Fitness Lecture by Covert Bailey, author of "Fit or Fat," Kiva Auditorium, Convention Center, 6:30-9:30.

**Nov. 4-6** — Classics Theatre presents "Alice In Wonderland," 8 p.m., KiMo.

**Nov. 4-5** — Orchid Show, Winrock Center Mall.

**Nov. 4-6** — 11th Annual Southwest Arts & Crafts Festival, 11-9, Fri., 10-9, Sat., 10-6, Sun., Industrial Bldg, State Fairgrounds.

**Nov. 7** — Travel film series, "The Mediterranean," 7:30 p.m., Popejoy.

**Nov. 8** — The Best of Broadway and International Theater: Della Reese in "Blues in the Night," 8:15 p.m., Popejoy.

**Nov. 10-13** — Indian National Finals Rodeo: world championship rodeo competition, pow-wow, arts & crafts trade fair, evening performances Thurs., Fri., Sat.; matinees Sat. & Sun., Tingley Coliseum, State Fairgrounds, 766-2151.

**Nov. 11-12** — NM Symphony Orchestra, guest conductor, William Noll; guest artist, Michael Debost, flutist; 8:15 p.m., Popejoy.

**Literary Club** — The first assignment of the literary club is to read this article. We're still trying to get some of you interested in forming a literary group. If you (1) have any experience with this type of organization, (2) have some ideas on activities that could be initiated or (3) just plain want to get involved, please call Tom Lenz, 4-8486.

\* \* \*

**Horseshoe pitching** — Tom Towne (7535) took the recent 24th annual Sandia Laboratories horseshoe pitching tournament by edging out retiree Leo Bressan, who at one time had a considerable lead, in the Class A competition. Leo won the Retirees Only Class by beating runnerup Dan Padilla.

In Class B, Wayne Sly (7654) was the winner, James Reed (7473), runnerup.

David Sealy (2525) took Class C, James Fisher (7622), runnerup.

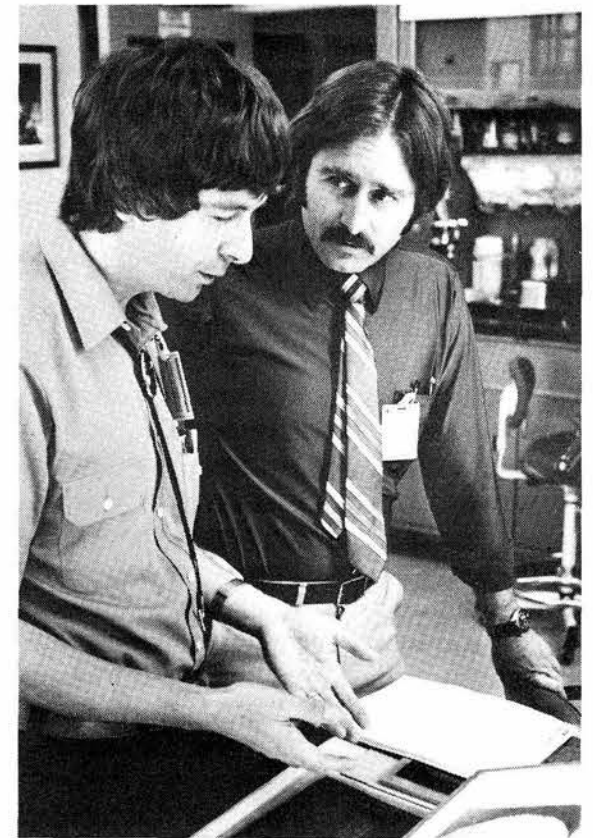
The women's event winner was Carnella Towne (Tom's wife), and the runnerup was Cherry Swartz (wife of Bill, 7524). Tom and Cherry teamed to take the mixed doubles event.

\* \* \*

**Softball** — The softball team Toma won the recent Sandia League Softball Championship tournament by beating the American Sandwich Shop team in two consecutive games. Toma players are Phil Gallegos (7474), Dino Gallegos (7474), Steve Sanderson (9259), Jerry Greene (9216), Steve Wilde (9741), Ted Garcia (2631), Joe Maez (1134), Bob Vargas (7483), Eddie Barreras (7485), Nestor Ortiz (9413), Gary Rivord (2623), Scott Bischee (1134), Tito Bonano (6413), William Jernigan (2341), and Sal Baldonado (7474), coach.

\* \* \*

**Table Tennis** — The Sandia Labs Table Tennis Association holds its annual tournament Saturday, Nov. 12, starting at 8 a.m. at Monroe Junior High School, Indian School and Louisiana. Entry fee is \$3. For details, call David Sealey (2525), 4-4475, or Jim Sanchez (3422), 4-1908.



MOVING TOWARD increased understandings — of scientific concepts of mutual interest and of professional capabilities — are heads of UNM's science departments and Sandians in the Research VP 1000. Eight UNM scientists visited Sandia last month and learned something of its resources and people. Here, John Panitz (1134, left) discusses biological imaging with Donald Duszynski, chairman of UNM's Department of Biology.

## Congratulations

Gerry Mitchell (6421) and Kathie Ebel married in New York, Sept. 9.

Patricia (2153) and Larry Lujan, a son, Larry, Sept. 20.

Laurence (2153) and Ann Washington, a son, Kenneth, Sept. 18.

Robert (2153) and Francis Sanchez, a son, Ricardo, July 25.

Michael (1251) and Kathy Wilson, a son, Joseph Samuel, Sept. 14.

# Henry Street Grows Grapes



The road turns right at Jemez Pueblo and enters the Ponderosa Valley. About three miles into the valley on the left side of the road is Henry Street's (2523) place. He calls it the Ponderosa Valley Vineyard. Chest-high rows of lush green vines stretch across the valley floor.

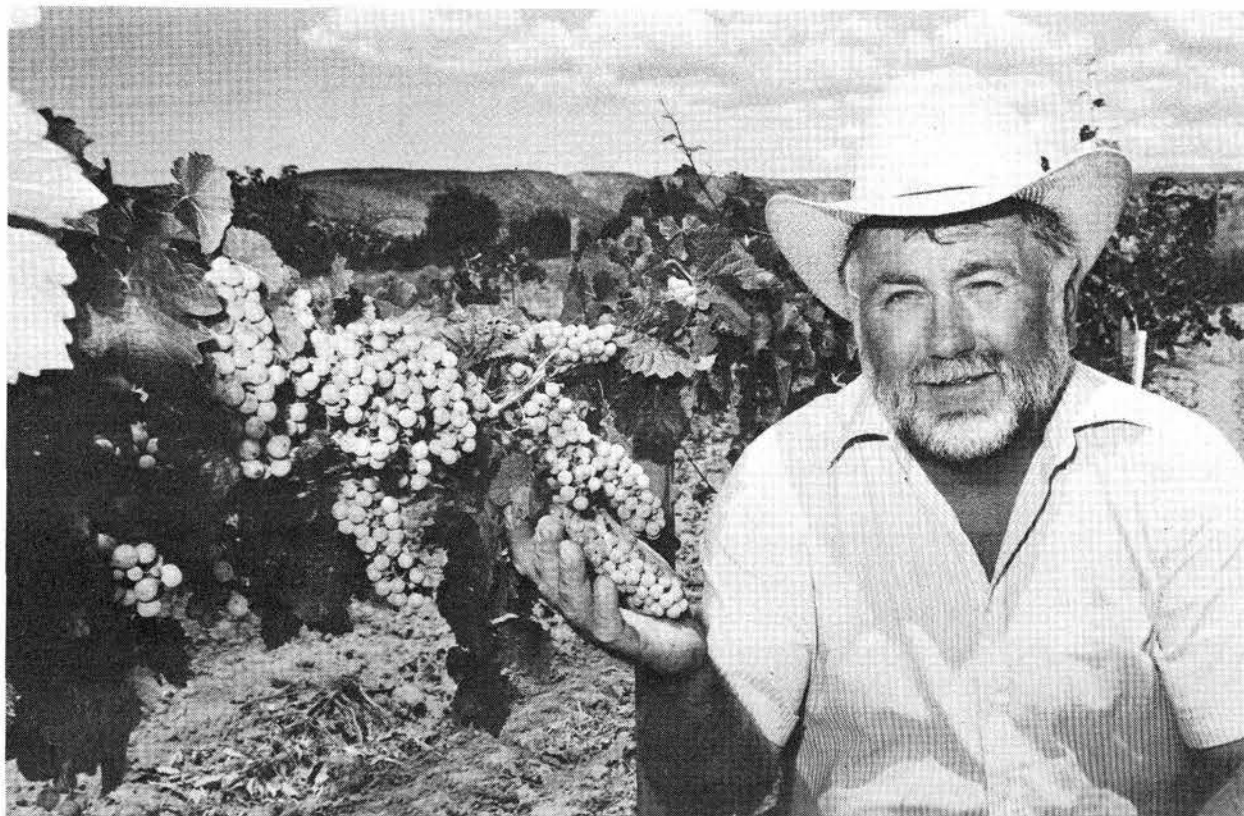
They're loaded with pale green grapes. Behind this area is a large cleared space where young vines grow eight feet apart.

"The cuttings for some of these vines come from Concannon and Wente Brothers vineyards in Livermore," Henry says. "Brought a bundle of cuttings back on the plane seven years ago. The Concannon and Wente people were very helpful and encouraging.

"I did a lot of research before I started this venture. Growing grapes in New Mexico is not the same as growing them in the Napa Valley of California. My vineyard is at 5800 feet elevation, and frequently we get sub-zero temperatures in the winter.

"I read everything I could on how wine grapes are grown in the Ukraine. Many of their techniques with fertilization and winter soil preparation were adaptable to New Mexico. I selected 12 varieties of vines as having potential for this area, planted a few of each, and then sat back to see how they would grow. White Riesling, Gewurztraminer and a hybrid called Siegfried are the three that have proven to be best for my area. Future expansion, however, will be with white Riesling and Siegfried."

Henry uses two methods to irrigate his vineyard — flood irrigation from the Ponderosa Village ditch irrigation system and a solar-powered drip system. When Henry considered a one-and-a-half acre expansion, he chose drip irrigation for its



HENRY STREET (2532) grows Johannesburg Riesling grapes at his vineyard near Ponderosa. Each vine produces about 20 pounds of grapes annually. Henry started his vineyard seven years ago with cuttings from Concannon and Wente Brothers vineyards in Livermore.

water- and work-saving features. A 4x6-foot photovoltaic array generates five amperes at 36 volts to power a DC motor to drive a pump in a shallow 35-foot-deep well. If the sun shines, the well provides about five gallons of water per minute for about four hours each day.

The water is pumped up into a 2650-gallon storage tank 13 feet above the ground. This tank provides the storage capacity and the head pressure necessary to properly run a drip irrigation system. Upon demand, the water is discharged at 15 gallons per minute into the vineyard distribution system.

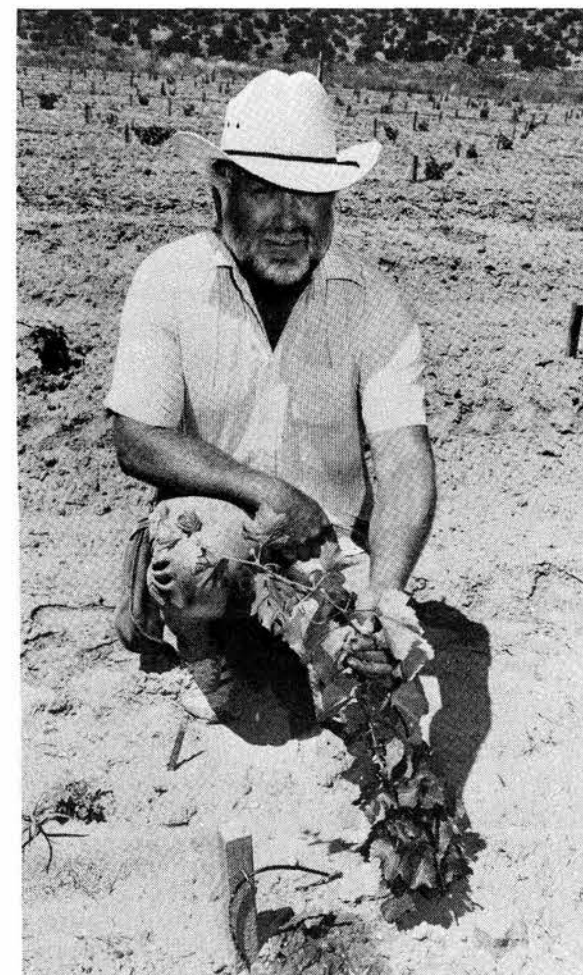
At each vine, a drip emitter allows water to drip at a rate of one gallon per hour. With new vines, a half-gallon a day during the growing season ensures proper moisture for adequate growth. Henry's new addition to the vineyard contains 640 vines, so the storage tank has the potential for a week's water storage if the sun fails to shine.

"Last year was the first commercial sales year," Henry says. "We sold 3500 pounds of grapes to a small winery in Dixon, N. M., called La Chiripada. The

white Riesling-Siegfried blend was well received in the tasting room. The Ore House restaurant in Santa Fe purchased almost the entire lot and sold it as their New Mexico house wine.

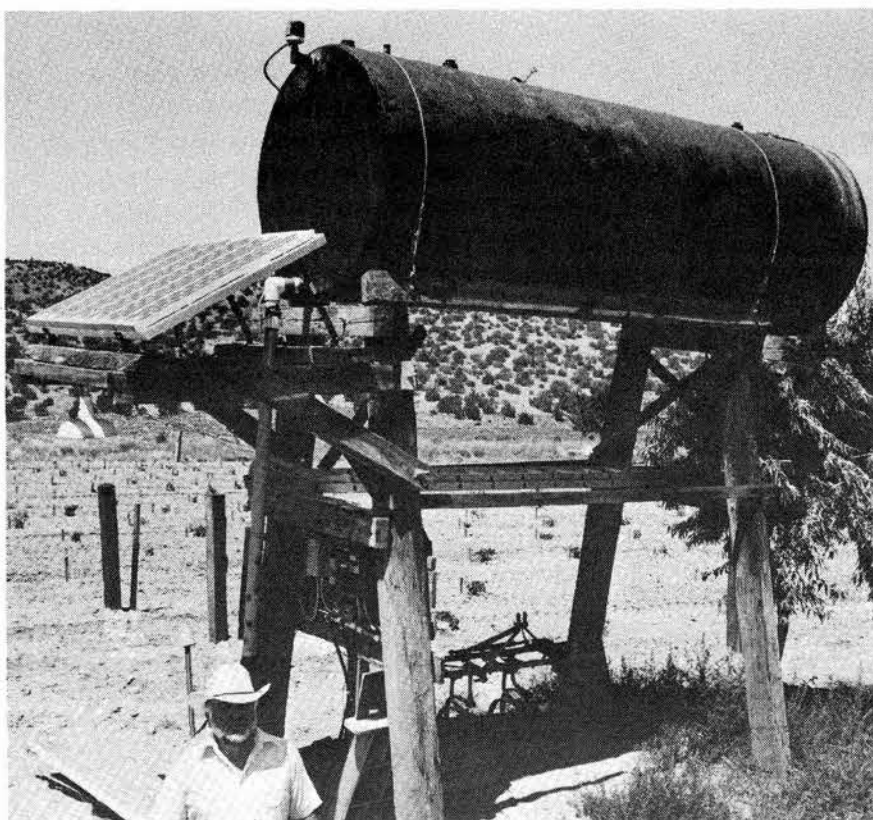
"I'm a weekend farmer," Henry continues. "I spend most weekends during the summer in Ponderosa. My family enjoys it. Someday we'd like to retire here."

Henry has another four acres across the road from the vineyard. Once his present young vines have been trained up to the wires, he plans to expand. Eventually he plans to have about six and a half acres of producing vines. Wine grapes sell for around 30 cents a pound in New Mexico. At that rate, a small-acreage farmer can anticipate a \$1500 per acre return on his grapes.



NEW GRAPE VINE, located adjacent to a drip irrigation system emitter, was started from a 12-inch-long cutting. Vines start producing marketable grapes in three years.

WATER for Henry Street's new vineyard is supplied from a 35-foot-deep well. A photovoltaic array provides power to drive a DC pump. The water is pumped into a storage tank to provide volume and pressure necessary for drip irrigation. Timing system controls are mounted on the panel beneath the solar collector. The 2650-gallon tank is formerly a gasoline tank from a filling station, the timbers from a bridge.





## Experts Needed

### Younger Generation Meets Risk Assessment

Kathleen McCaughey (2543) needs help. She's looking for the assistance of some Sandians in implementing this year's version of the Contemporary Issues in Science program, a nationwide program that several of Albuquerque's high schools (some public, some private) take part in.

This year's challenge to the students is to construct a risk/benefit assessment in the areas of nuclear energy, hazardous wastes, or genetic engineering, areas in which many Sandians have unique expertise.

Briefly, the program demands that each student write a research paper (complete with documentation) and participate in a forum on the issues raised at the end of the school year.

Sandians could provide critiques of the content of the research papers, give lectures on the subject to a high school class (or assembled classes), and/or participate in the forum.

Last year, when the challenge was to explore the world of water — its political, economic, or technical aspects — 120 students wrote papers and 68 participated in the forum.

"We expect more to join the Contemporary Issues program this year," says Kathleen. "The three areas chosen are more controversial. So we need some help from the community."

Call Kathleen on 4-1573 for further information.



Kathleen McCaughey (2543)

#### MAKING MEDICINE IN SPACE



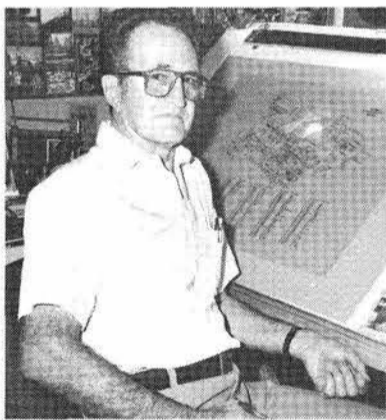
People who think of space as a vast boondoggle may simply be suffering from a lack of imaginative understanding. What about the value to people who need [space-manufactured] medicines, and who couldn't otherwise obtain them in as pure a preparation and as cheaply, if they were forced to depend on earthbound procedures? What about the value to scientists themselves, who could use the pure substances available in considerable quantity, to test theories of tissue function that might greatly advance our understanding of cancer, arthritis, atherosclerosis? Those who feel that the money spent on the development of space capabilities might better be directed toward the relief of human suffering may simply be failing to grasp the fact that the path to such relief leads through space.

Isaac Asimov in *Health*

## Retiring



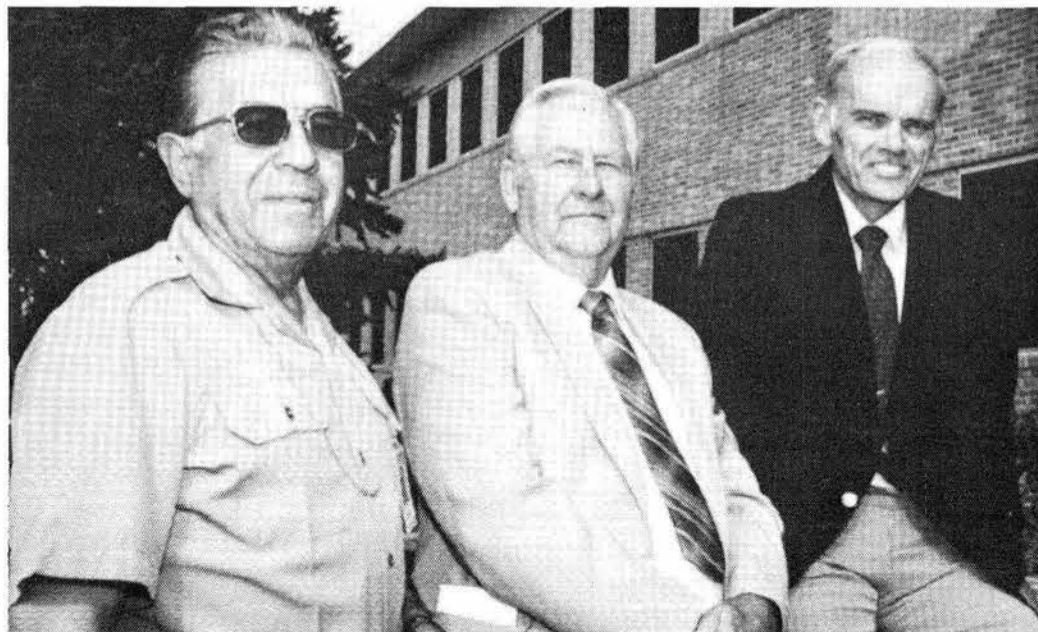
San Moore (7170)



Rusty Ganzerla (3155)



Florencio Baca (3618)



Ray Larribas (3742), Jay Hughes (3731), and John Ford (7252)



Bill Bedwell (3435) and Charles Allen (3435)



In this issue we are highlighting a few opportunities for volunteers to take advantage of autumn days to make volunteering a family activity as well as a learning experience. If you are interested, Call Karen Shane (4-3268).

**ALL FAITHS RECEIVING HOME FOR CHILDREN** needs help building a block wall around a small garden. A mason has volunteered to supervise the project. What weekend would be convenient?

**NM SKI TOURING CLUB** needs crew members to develop new trails in the Jemez Mountains on Saturday, Oct. 29.

## Help Bosque Recover

Volunteers are needed for "Bosque Recovery Day" set Nov. 5.

Now that the bosque river area has been designated the Rio Grande Valley State Park (to be administered by the City), it needs cleaning up. The area has been used as an illegal dump for many years.

Volunteers with shovels, rakes, pitch forks, and sack lunches will meet at 9 a.m. at one of three sites — Rio Bravo, at the northeast side of the Rio Bravo bridge; Atrisco, at the northwest side of the Central bridge; and Barelás, at the south end of Tingley Beach.

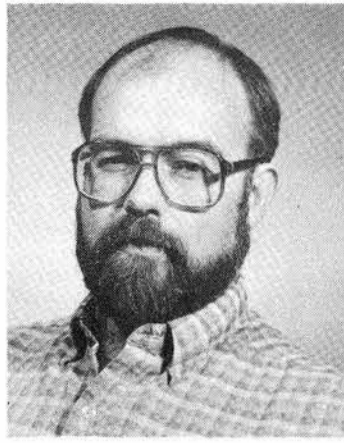
The work is being coordinated by the Volunteers for the Outdoors, Albuquerque Parks and Recreation Department, and Bosque Neighborhood Associations who will provide refreshments, trash bags, and hauling vehicles.

Crew leader training sessions are scheduled tomorrow from 9 to 12 at the south end of Tingley Beach. If you are interested in attending, call Sam Beard (1633), 4-4394. Sam has been active in the Volunteers for the Outdoors since it was organized a year ago. Projects completed include Embudo Canyon Recovery Day, Pecos Wilderness Project, and Pecos Trail Days.

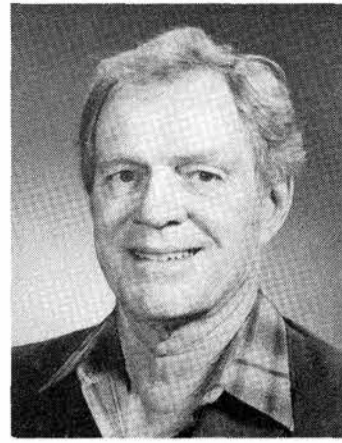
# MILEPOSTS

## LAB NEWS

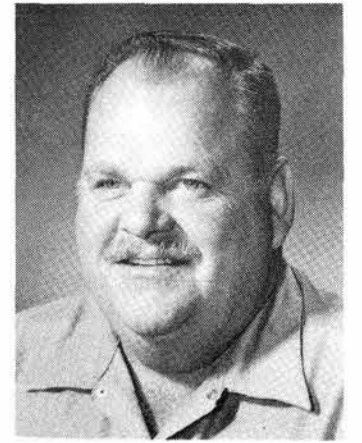
OCTOBER 1983



Oscar Woodson (3615) 10



Jim DeMontmollin (5260) 25

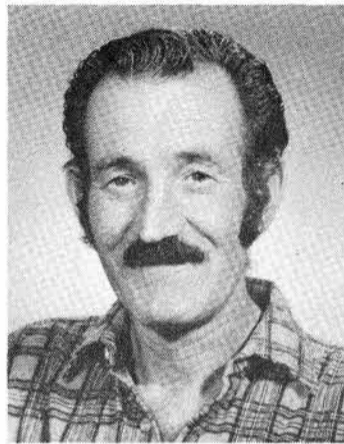


Howard Heerdt (6421) 10

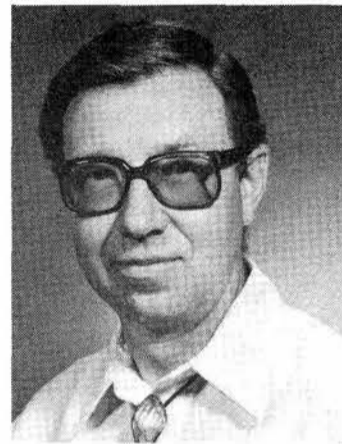


John Galt (1000)

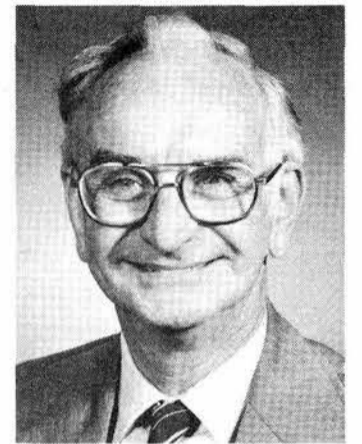
BTL35



Vernon Shiptet (3618) 10



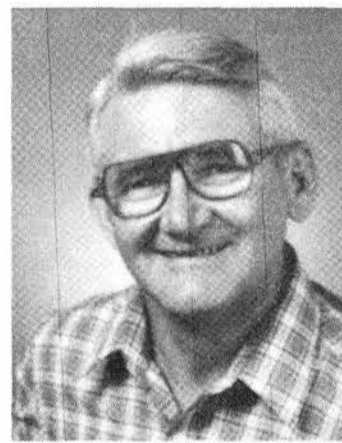
Dave Begeal (2512) 20



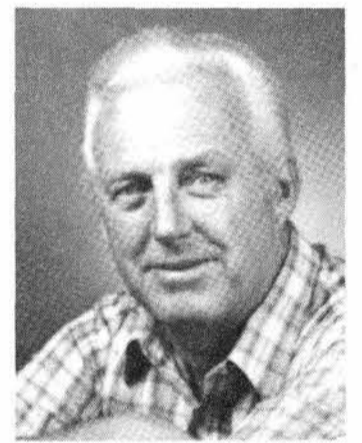
Don Spatz (5132) 30



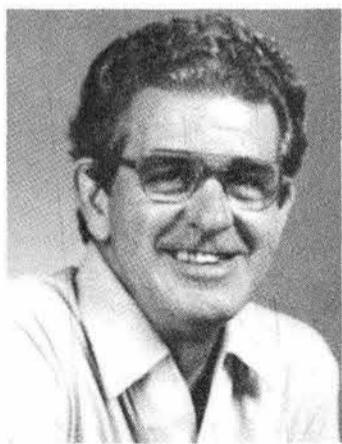
Donna Mitchell (8235) 10



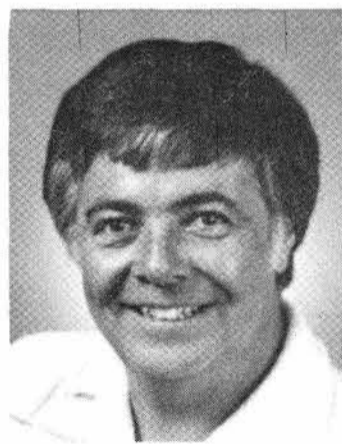
Joe Vanderpoorten (8412) 25



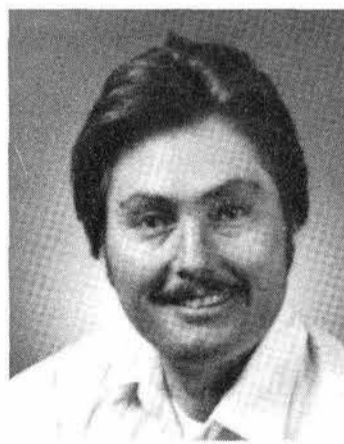
Clarence Johnson (8414) 25



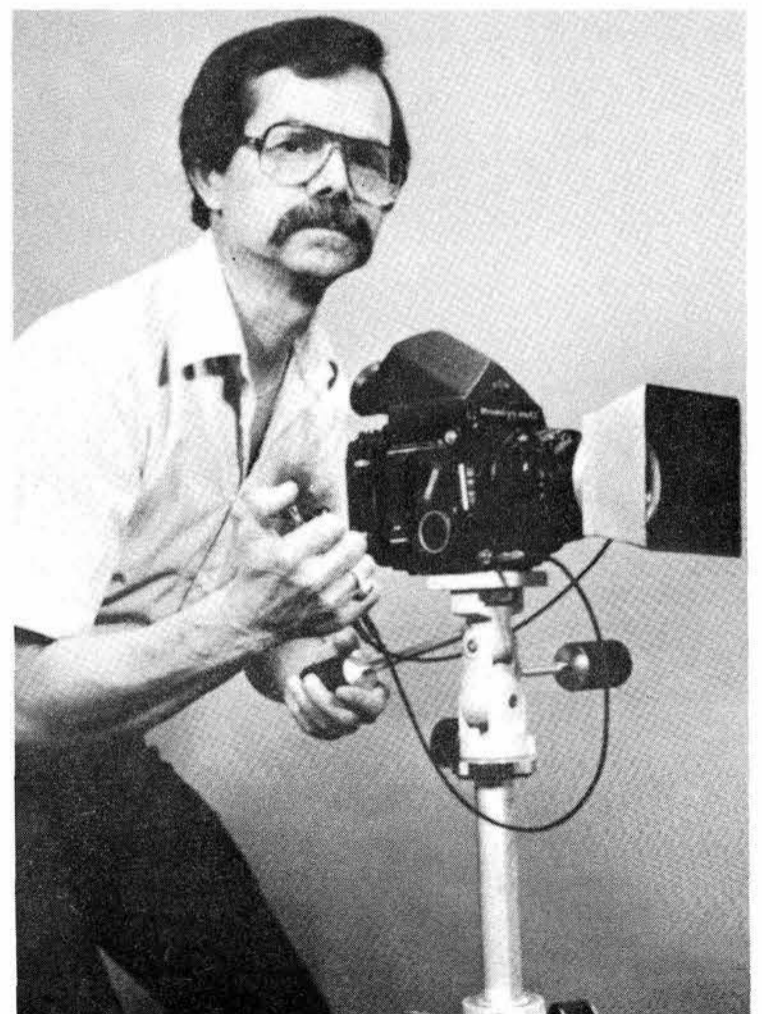
Bernie Dunne (8273) 15



Paul Dominguez (8161) 25

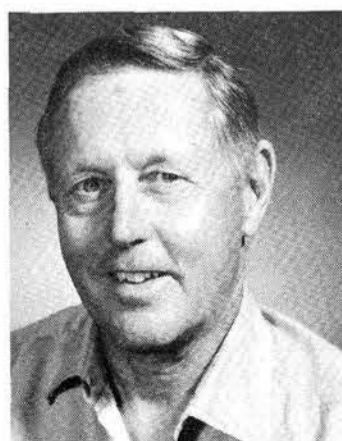


Jim Mitchell (8413) 10

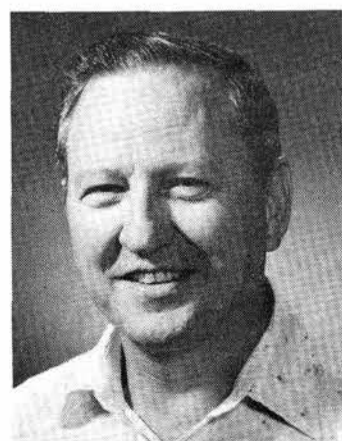


Gerse Martinez (3162)

25



Jim Stoever (7116) 30



Al Disch (2335) 25



Bruce Worden (8465) 25



## Favorite Old Photo

MY FATHER-IN-LAW took this photo of an antique car parade in New London, Wisc., in the early '30s. The new cars parked in the foreground would be antiques today.

Jerry Long (7111)

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- No more than two insertions of same ad.
- Include name and organization.
- Housing listed here for sale is available for occupancy without regard to race, creed, color, or national origin.

### MISCELLANEOUS

**ADOBE** Today Picture Supplement, ideas for your adobe — fps, doors & windows, kitchens, baths, exteriors, solar adobes, \$2.50. S. Hwy. 14 Project, LAB NEWS, Bldg. 814.

**ALUMINUM** cap for mini pickup, \$100. Thorn, 892-7944.

**CAMPER** for Blazer or Jimmy pop-ups, stove, sink, icebox, heater, 2 beds, \$1295 OBO; Kenmore dishwasher, 1½ yrs., 18" wide, \$145. Humberstone, 281-1120 after 6.

**2 STEEL** casement window frames, 3 panes w/by 4 panes H, 2 panes W by 3 panes H, approx. 50"H x 53"W, 38"H x 37"W. Sandy, 888-4579 after 6.

**SIX piece** walnut dining room set: buffet, table & 4 chairs, \$700. Montgomery, 821-5827.

**JUKE BOX**, Wurlitzer, early 1960s, colorful, holds 100 45-rpm records, (not included), \$950. Smith, 821-3199.

**AKC Toy** Yorkshire Terrier, male, 3 mos. old, \$400. Brunneske, 836-0459.

**COMPTON** encyclopedia, 1957 edition, 15 vols. + supplements 1958-1974, \$45 OBO; Everett spinet piano & bench, dk. mahogany, \$900. Beatty, 299-3429.

**CHAIN LINK FENCE**, 150', \$150; 2 sliding mirror doors, \$100; guitar, \$30; IBM typewriter; H-70-14 tires. Bernal, 897-0424.

**REVOLVER**: Charter Arms .22 mag., 3" bbl, adjustable rear sight, blued, w/holster, 3 boxes ammo, \$150 firm. Zeuch, 296-4969.

**FIBERGLASS-SPA**, use above or in ground, redwood skirting & steps. Yambrovich, 293-0359.

**717 BERNINA** sewing machine, maple cabinet w/foot pedal, \$175. Sharp, 299-5068 after 6.

**SOFA** sleeper, Colonial Kroehler Citation, high wing back, moss green woven fabric, \$200; rug, short pile, 8' x 8', \$30. Lauriano, 881-3486.

**30" GAS RANGE** & hood, green \$100; rear window for '74 Ford pickup, \$10; 24" x 24" skylight, \$20. Molina, 299-8718.

**KEYSTONE** movie camera, carrying case, projector, screen, \$85. Johnston, 865-4004.

**ANTIQU** drop leaf table, 42" x 52" open, 42" x 24" closed, \$135 OBO. Rejent, 293-8554.

**GENTLE** Palamino gelding. Crass, 281-3889.

**GREEN** sofa & 2 matching chairs, \$50. Trujillo, 898-6502.

**NEW** timing chain for '73 Datsun 1600cc, \$25; new tensioner for same, \$9. Aeschliman, 281-1227.

**POWER** CRAFT arc welder w/accessories, \$145; Chevy carburetor, Rochester 2-bbl, \$10; Chevy power glide AT, \$30. Baczek, 255-3429.

**MATCHING** SOFA & chair, solid brown, \$100 for both. Martinez, 299-5728.

**WATERBED**, king size, includes frame, pedestal, mattress, liner, heater, fill kit, pad & set of sheets, \$100. Tucker, 881-0247.

**SOFA**, Drexel Heritage, traditional, lt. green, \$300. Harris, 299-4559.

**ROYAL** Port. typewriter, manual, \$10. Thornton, 298-1290.

**CAR** RAMPS; dumbbell set; Coleman ice chest, gas lantern; CB w/outside antenna. Graff, 268-5291.

**PIANO**, Kimball, console, peach wood, w/bench, \$1100 OBO. Lopez, 296-6813.

**GIBSON** C1 classic guitar; sliding glass patio door w/screen; 2 fluorescent ceiling fixtures; stainless sinks; alum. window, more. Cole, 293-6122.

**TENT** for converting Scout II into camper; dbl. sliding glass doors, \$50 ea. Cope, 296-0886.

**CLARINET**, new pads, \$100. Pigg, 865-6463.

**POOL** TABLE, 4 x 8, ¾" slate, w/accessories, including light fixture, \$375. Roose, 298-1971.

**HAMMARLUND** HQ 129 AM communications receiver, manual & Xtal calibrator, \$65. Meikle, 299-4640.

**TWO** ferrets, one male, one female, neutered & descented, cage & equip. \$150; 10 spd. ladies Raleigh bicycle, \$150. Shurtleff, 884-4909.

**REFRIGERATOR**, 12.5 cu. ft. upright, white, Frigidaire, w/top inside freezer compartment, \$75. Linn, 296-3176.

**BESLER** color calculator for finding filters to print color negatives, \$8. Henry, 266-6467.

**RABBIT** HUTCH w/droppings pan, \$15; girl's 20" Schwinn bicycle. Conrad, 298-2691.

**COMMODORE** Super Pet computer system, dual processor & display, dual disk drive, printer, manuals, etc., complete system \$2000/offer. Amdahl, 293-6076.

**SHELL** for Ranchero, cab high, built by Winnebago. French, 293-3451.

**WOODEN** DESK & chair; dining room table, 6 chairs, china cabinet; elec. lawn mower, best offer. Bateman, 298-9502.

**LARGE** SOFA w/queen size hide-a-bed, Herculan fabric, \$300. Pritchard, 299-3543 after 5.

**FURNITURE**: sectional sofa, \$65; coffee & commode tables, \$90 set; white dbl. dresser, \$65; Payne 75K BTU furnace. Gabaldon, 266-0028.

**HAND** MADE crafts, ceramics, Oct. 28-29, 10-6 p.m., 11708 Snow Heights NE. Kerley, 298-9691.

**PENTAX** Spotmatic 50mm f1.8 lens, 28mm f3.5 lens, 135mm f3.5 lens, extension tube set, gadget bag. Hanson, 298-2120.

**TWO** microflops w/S100 controller, \$400; TTY, \$75; s100 modem, \$50; +5, -12, +24V power supply, \$30. Hubbard, 842-9431.

**ONE** ticket to Al DiMeola concert, \$10. Poulter, 298-6131 after 5.

**SHADOW** for Toyota Celica GT Lift-back, '76 or '77, \$35; Smith & Wes-

son model 28 357 magnum, 4" barrel w/box, \$250. George, 266-3203.

**ATARI** 2600 W/11 cartridges including Ms PacMan, Phoenix, Pitfall, & more, \$135 OBO. Anthes, 884-3644.

**GARAGE** SALE: Sat. & Sun., Oct. 29-30, 6600 Mossman Pl. NE. Westfall, 883-4390.

**BED** FRAME, single size, Ethan Allen, pine spindle type, old tavern finish, \$160. Schaedla, 898-9210.

**MOVING** BOXES, sturdy, all sizes, make offer. Taylor, 864-3338.

**PRE** 64 model 70 Winchester 30-06; Remington 721, 264 Winchester mag; Ruger 77, 250 Savage; Winchester model 88, 308; Ruger Blackhawk 30 cal. Zamora, 836-6101.

**DINETTE** set w/leaf & 4 chairs; patio chairs. Bonahoom, 296-4450.

**HIDEAWAY** twin bed, \$50; twin headboard, \$10; 13" radials for Accord, Prelude, etc., \$25 ea.; '75 Honda Civic parts: doors, \$85 ea., seats, \$25 ea. fenders, \$5 ea., other parts. Zirzow, 298-1479.

**NEW** fuel pump for 1963 Chev. 6, 230 cu. in. engine. Denish, 256-1559.

**POODLE-CROSS**, housebroken, needs fenced yard & companionship, male, 7 yrs. old, \$10. Smiel, 865-9081.

**CHAIN** SAW, Homelite XL, new, never used, \$150 OBO. Hueter, 242-1620.

**PATIO** DOORS, 6' wide, ½-fixed, ½-slide, dbl. glazed, anodized lattice & frame, \$150; Coleman camp heater, used once, \$40. Kwak, 294-2524.

**LOVESEAT** & SOFA, \$250; Sears upright freezer, \$225; make offer '72 Yamaha 175 Enduro, 2 color TVs. Duimstra, 299-6106.

**ELECTRIC** GUITAR, Ibanez Destroyer II w/hard case, less than 1 yr. old, \$350. Brigham, 292-4399.

**UNM** basketball season tickets, two for \$150 (\$180 value). Pavlakos, 298-5387.

**SMALL** stereo system, amp., Garrard turntable (needs work), 2 speakers, table sell separately, all for \$35. Burstein, 821-6688.

### TRANSPORTATION

'73 **DODGE** Charger, new engine, AT, AC, PB, \$1600. Stone, 344-9813.

'79 **KAWASAKI** KZ-750, 2-cyl., \$1000 or trade for small car. Roeschke, 298-0365.

'80 **VW** truck, front wheel drive, reg. gas, 27K miles, new Die Hard battery, \$3800. Roth, 243-3283.

'69 **DATSUN** pickup, shop manual, 98K miles, \$1300. Giddings, 281-3582.

'70 **CHEV.** 1 ton, 12' stake bed, low mileage, orig. owner, \$2500. Laymon, 293-3642.

'79 **PINTO** hatchback, AT, AC, PS, PB, AM-FM cassette, 51K miles. Tucker, 292-8954.

'77 **CHEV.** Camaro, AT, PB, PS, AC, 50K miles, new tires, AM-FM stereo cassette, book value. Paul, 265-4277.

'78 **HONDA** GL-1000 Goldwing; '79 Honda CM-400T; Martin guitar, left-handed model D-41. Perryman, 281-3020.

'55 **CHEV.** (no engine/trans.), rebuilt rear-end, \$800. Marquez, 345-2223.

'81 **YAMAHA** 750 SECA, shaft drive, Vetter fairing, \$2100; '79 Honda CM-400T, plexifairing, backrest, \$950. Barr, 884-2193.

'80 **SUBARU** GL 1600 SW, 5-sp., AC, AM-FM, rack, 32K miles; old horse trailer, 2 axle, \$400. Lackey, 898-6638.

'78 **HONDA** Goldwing, fairing, saddle bags, trunk, CB, low mileage, \$3500. Parker, 821-9624.

'72 **CHEVY** pickup, ½-ton, AC, power, AT, LWB, 73K miles, \$2000. Rogers, 298-7907.

'75 **HONDA** 750 Super Sport, 4-cyl., orange metallflake, 3600 miles. Ortega, 296-7090.

'82 **CAMARO** sport coupe, AC, AM-FM cassette stereo, 16K miles, \$7500 OBO. Gonzales, 831-2970, daytime, 883-5060.

'76 **VW** Scirocco, 1500 cc, 4-sp., AC, AM-FM ST, low miles, 25/35 mpg, \$2800 OBO. Aeschliman, 281-1227.

'78 **FORD** Fiesta Ghia, white, 62K miles, \$1550. Slosarik, 265-3947.

'80 **HONDA** CM 200T, 1800 miles, make offer. Cieslak, 294-0371.

'71 **DATSUN** 510, 4-sp., 1600 cc, Swier, 298-8435.

'82 **MUSTANG** G-T, 4-sp., V8, AC, PS, PB, black, AM-FM-Cass stereo, P windows. Roberts, 265-3281 after 5:30.

'75 **MUSTANG** II, 4 Super GT sport tires, E60-14, 4 mag 5-hole wheels, lug nuts. Jacobs, 821-2403.

**BICYCLE**, MEN'S 26" 10 spd. Schwinn Varsity, \$100. Gomez, 256-1584.

'72 **OLDSMOBILE** Cutlass, 2-dr., AM-FM, PS, AT, engine has 50K miles, \$850. Dunkin, 892-8234.

**MOTOBECANE** Sprintour w/Blackburn carrier, spare set of tires, unused Cannondale panniers, \$280 cash. Zeuch, 296-4969.

'74 **MERCURY** Montego 4-dr., 302 V8, AT, AC, rebuilt trans., 4 almost new tires, \$750. Pritchard, 299-3543 after 5.

'69 **CAMARO** SS, 330HP, 350, Turbo 350, PS, AC, headers, turbo mufflers, traction bars, AM-FM-cass., keystone wheels, custom paint, more, \$4900. Hurley, 296-9264.

**FREE** SPIRIT 10-spd. bike, 23" frame, 27" wheel, \$70. Thompson, 293-8390.

'81 **TRANS-AM**, turbo, 4 disc brakes, positive traction, warranty, low mileage, all special equipment, consider truck in trade. Arana, 299-1214.

'73 **JAGUAR** XKE 2+2, AT, PS, PB, AC, AM-FM tape, dark blue, camel interior, 68K miles, \$11.5K. Rutledge, 821-3048.

'83 **JEEP** CJ5, Renegade pkg., fully equipped, 4-sp., 258 engine, 4000 miles, \$3500 & take over payments. Jaramillo, 1-864-8491 after 6.

'80 **BUICK** Skylark Limited, PS, PB, AC, AM-FM-8-TK, cruise control, \$3800. Stichman, 293-6096.

'79 **280ZX**, 35K miles, GL pkg., new tires, cruise control, 5-sp., \$7895. Fleming, 265-4277.

'77 **BUICK** LeSabre sport coupe, fully loaded, 72K, below book, \$3400 firm. Gregory, 821-1429.

'75 **TRANS-AM**, '72 455 HO 4-sp., 4.11-12 bolt positraction, Kenwood receiver, new radials, many new parts. Seaburn, 299-2215.

'78 **DODGE** Diplomat, PS, AT, AC, AM-FM, PW, vinyl roof, \$2995. Miranda, 255-3342.

'78 **FORD** Fiesta Hatchback, 42K miles, 4-sp. trans., front wheel drive, \$2800 OBO. Komarek, 281-3826.

**HONDA** CL350 motorcycle, 11,800

miles, \$500. Thorn, 892-7944.

**HOT ROD**, 1927-T Roadster, all steel, professionally built, street show, dependable, fast, featured in many articles. Marchi, 299-8516.

'80 **DATSUN** 200SX Hatchback, AC, AM-FM cassette, 5-sp., fuel injection, 53K miles, \$5100. Seidel, 298-1791.

'83 **HONDA** CR80 R motorcycle, \$700. Brigham, 292-4399.

'71 **TOYOTA** Corona MK II 4-dr., AT, AC, 20K miles on overhaul, new trans., \$1000 OBO. Pedersen, 294-8566 after 5.

'77 **MGB** convertible, 4-cyl., 4-sp., green, green interior, AM-FM-cass w/booster, 4 speakers, extras, \$4200. Martinez, 268-3342.

'78 **CHEVY** custom van, Executive pkg., many extras, \$6995. Ripi, 293-2553.

'76 **PENTON** Mint 400 Enduro bike, 1000 miles, chrome-moly frame, KTM engine, Ceriana shocks, 46HP, \$700. Fox, 881-8095.

'80 **CHEVY** Monza, 4-sp., PS, PB, low mileage, \$2950. Brosman, 884-3932.

'69 **FORD** SW, 4-dr., PS, PB, 8-cyl., 429 motor, reg. gas, \$500. Crawford, 881-2160.

'80 **OLDS** Cutlass Supreme, AC, PS, PB, cruise control, tilt steering, AM-FM-Cass. stereo, 24K miles, \$6700. Falacy, 293-2517.

'72 **MGBGT**, new paint, exhaust system carburetors, \$2500. Campbell, 299-9195.

### REAL ESTATE

**5 ACRES** Indian Hills area, Edgewood, water, utilities & septic on land, \$30K. Sanchez, 832-6260.

**2-BDR. ADOBE**, guest house & garage on 1 acre, 15 miles south of Deming, NM, on Rt. 11, fireplace heat. Miner, 1-531-2649.

**IN T. OR C.**, 70' x 90' lot, 2-bdr. MH, partly furnished, new garage, RV hookups, \$21,950; ½-acre MH lot South Moriarty, utilities except septic, \$4750, terms, more available.

**Aaron**, Box 1580 T or C, 87901, 894-6759.

**MH** & lg. fenced lot 3 miles from Elephant Butte Lake, \$18,500 OBO. Cordova, 881-2209.

**2 ACRES** in Bosque Farms. Johnston, 865-4004.

**TWO ACRES**, 7 miles east of Tramway, \$250K house on adjoining lot, elec., proven water, \$39,500, assume 8¼% loan. Ray, 298-0408.

**SCHULTZ** MH, 1977, 15x65, 2-bdr., priced below book value, move to your lot. Runkle, 877-2008.

### WANTED

**PULSE** monitor, to rent for week or so. Shunmy, 265-1620.

**302 CU. IN.** Ford engine. Prevender, 299-5253.

**TOYS** - Salvation Army Christmas. Place in box in 892 or 836 or I will pick up at your home, asap. Dobbins, 892-7086.

**TIRE** CHAINS for L78-15 or 9.15x15 mud & snow tires. Marrs, 822-0367.

**FEMALE** non-smoker to share 3-bdr. house NE, 3 miles from Eubank gate, rent negotiable. Herndon, 294-2678.

**MOVIE** projector, regular 8mm only; inexpensive flatware for camping utensils. King, 298-2628.

### LOST & FOUND

**LOST**: heavy 14 CT. gold bracelet. Reward. Ahr (3431).

## Eclipse Tonight, Horrors Sunday

TONIGHT at Happy Hour, a variety band called Eclipse holds the bandstand while stuffed flounder del ray is the dining room special at \$6.95. In addition, the Club's regular menu featuring fine steaks, seafood, and chicken is available. Happy Hour prices start right after work and continue until 8:30 when the music starts. Dining hours are from 6 to 8:30. Reservations help — call 265-6791.

HALLOWEEN and the Club's annual spectacular for kids is set for Sunday, Oct. 30, starting at 6 p.m. Plans for the "House of Horrors" are frightening — you'll see Frankenstein come to life before your very eyes, the Wolfman will break his chains, the Mad Butcher will cut up, Dracula will open his coffin, and assorted witches, spooks, and goblins will cavort through the darkened chambers beneath the Club.

Admission is \$1 per kid, which buys entrance to the House of Horrors, one coke, one bag of popcorn, and tickets for five games plus each kid receives a bag of goodies. The games include apple bob, cakewalk, fish pond, and all those fun things. There'll be a parade of costumes with prizes going to first, second, and third place winners. Hot dogs will sell for 50 cents. Members and their families only, please.

NEXT FRIDAY, Nov. 4, sees the variety band Red Wine playing for dancing while Chef Hank Perez wheels out his famous prime rib buffet. Hank performs magic



THE WACKY WIZARD (Bill Fienning, 5254) appears Saturday, Nov. 5, at the Coronado Club's Variety Night to perform a magic show for kids. His assistant is Siegfried the Dragon who was a hit during the recent ECP employee talent show in the Tech Area. Super sandwiches are available at 5, the magic show starts at 7, and it's followed by a Walt Disney movie, *Darby O'Gill and the Little People*. Admission is free, but members' families only, please.



LOTS OF FUN awaits kids at the Club's annual Halloween Party scheduled Sunday, Oct. 30, starting at 6 p.m. The monster, part of the cast of the House of Horrors spectacular, tells Adam Sanchez, left, and Kimberley Ortega about the Wolfman, Dracula, the Mad Butcher, and assorted spooks, goblins, and witches waiting for them. One dollar admission buys tickets to participate in games, a cakewalk, and other hi-jinks. Each kid receives a bag of goodies. Admission is \$1.

with a marvelous hunk of meat. At \$6.95, it's the best buy in town. Call 265-6791 for reservations.

VARIETY NIGHT on Saturday, Nov. 5, is another spectacular for kids. Bill Fienning (5254) appears as the Wacky Wizard (assisted by Siegfried the Dragon) and other things will appear — magic tricks. The show starts at 7 p.m. followed by Walt Disney's *Darby O'Gill and the Little People*. All your little people will enjoy the goodies available at 5 p.m. — popcorn, soft drinks, hot dogs (75¢), hamburgers (\$1), corn dogs (85¢), French fries, (40¢), fried chicken (\$1.50), desserts (75¢) and all that good stuff.

Admission is free to members and families.

THE CORONADO CLUB sponsors its first Arts and Crafts Fair on Saturday, Nov. 19, from 10 a.m. to 5 p.m. and everybody is invited. Arts and crafts — pictures and objects — will be on display and on sale in time for Christmas shopping. A variety of food and refreshments will be available all day. Artists and craftsmen (Club members only) are invited to participate and sell their handiwork. Tables and space are available for an entry fee of \$10. Call the Club office, 265-6791, right away to be included in the arrangements.

MARK YOUR CALENDAR now for a special Friday evening Nov. 11. By special arrangement, the Club is flying in whole Maine lobsters (16 oz. or larger) to be served in a fabulous buffet spread. Cost is \$12.95. Call 265-6791 now for reservations. One of the Club's favorite bands, Chisum, will play for dancing.

TRAVEL — The Coronado Club offers two vacation packages during the Christmas holidays — Las Vegas by bus Dec. 26-29 or San Diego by air Dec. 26-31.

The Las Vegas package includes snacks and refreshments on the bus, lodging at the Las Vegas Club downtown, and baggage handling. The price is only \$99.

The San Diego package includes air fare, hotel, admittance to the San Diego Zoo, Sea World, a day of unlimited rides at Disney-

land, and a ride on the San Diego Duck, a WWII amphibian. Cost is \$339 (double occupancy), and a \$200 deposit is needed now to nail down current air fare prices.

The Club has scheduled a trip to New Orleans during World's Fair time May 25-29, 1984. The package price of \$568 includes air fare, four nights at the Marriott Hotel, entrance to the Fair for two days, an elegant dinner at the famous Andrew Jackson restaurant, and a ride on a Mississippi river boat. Deadline for signing up is Nov. 25. Hurry, only a few spaces are left. For more information, see Shirley McKenzie, travel director, in the lobby tonight between 5 and 6 p.m.

### Medical Corner

## Blood Pressure Talk Scheduled Friday, Nov. 4

"Mild High Blood Pressure: To Treat or Not to Treat — That Is the Question" will be discussed by Dr. Terry Spaulding, UNM School of Medicine, on Friday, Nov. 4. Part of Medical's Go for Health Program, the talk will be presented from 12-12:30 in Theater Bldg. 815 (outside the Area).

Dr. Spaulding will cover the risks of mild high blood pressure, treatment — including both drug and non-drug therapies — and what drugs are currently being used.

Spouses are welcome to attend.

### FRANCAIS FRACTURE (Cont'd)



Mr. Goldberg registered at a French pension and went in to his first dinner. Presently he was joined at his table by a Frenchman who, before sitting down, bowed politely and said, "Bon appetit." With equal formality Mr. Goldberg rose, bowed, and said "Goldberg." This ceremony was repeated at each meal for a couple of days, until Mr. Goldberg consulted an acquaintance in the lounge, explaining how "the Frenchman tells me his name — Bon Appétit — and I tell him mine — Goldberg; but why keep it up day after day?" "Oh, you don't understand, Mr. Goldberg," was the reply, "Bon appetit isn't his name; it means 'I hope you have a pleasant meal.'" Mr. Goldberg thanked his friend, and arriving late for dinner, found the Frenchman already at the table. Before sitting down, Mr. Goldberg bowed formally and said, *Bon appetit.* The Frenchman rose, smiled, and murmured, "Goldberg."

— Marcy Powell in *Verbatim*